

Annual Work Plan

Title: Addressing Climate Change Risks on Water Resources and Food Security in the Dry Zone of Myanmar (Atlas project ID: 00089618)

CPAP Output: Strengthened capacities to adapt to climate change and reduce disaster risk in national, regional and local level

Strategic Plan Outcome(s): Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change

Expected Project Output(s):

1. Water capture and storage capacities in 280 villages enhanced to ensure improved access to fresh water supply during dry periods
2. 6,141 hectares of micro-watersheds are protected and rehabilitated through Farmer- Managed Natural Regeneration (FMNR) to increase natural water retention and reduce erosion
3. Community-based agro-forestry plots are established on 3,983 hectares of private and communal lands to conserve soil and water
4. Drought-resilient farming methods introduced to farmers to enhance the resilience of subsistence agriculture in the Dry Zone
5. Resilient post-harvest processing and storage systems introduced to reduce climate-induced post-harvest losses (droughts, rains and floods)
6. Diversified livestock production systems are introduced in 6,300 households to buffer the effects of flooding and drought on rural livelihoods
7. Climate hazard maps and risk scenarios are developed in each Township to support community-based climate risk management and preparedness planning
8. Local level climate and disaster risk management framework strengthened for timely and effective communication of climate risk and early warning information

Implementing partner: UNDP

Other Main Partners: Ministry of Natural Resources and Environmental Conservation (Dry Zone Greening Department, Environment Conservation Department and Forest Department), Ministry of Transportation and Communication (Department of Meteorology and Hydrology) Ministry of Agriculture, Livestock and Irrigation (Department of Agriculture, Irrigation and Water Utilization Management Department, Department of Livestock Breeding and Veterinary Department, Department of Rural Development), Ministry of Social Welfare, Relief and Resettlement (Relief and Resettlement Department)

Narrative

With the project implementation mechanism in place, UNDP will support (50,639) households in (280) villages of the Dry Zone of Myanmar to reduce the vulnerability of farmers in the Dry Zone to increasing drought and climate variability and enhance the capacity of farmers to plan for and respond to future impacts of climate change on food security. The project will be implemented in Shwebo and Monywa in Sagaing Region, Myingyan and Nyaung Oo in Mandalay Region and Chauk in Magway Region.

Key results will include:

- **70 small scale water pumping systems installed**
- **56 communal water tanks installed**
- **20 shallow tube well and 12 deep tube well renovated or constructed**
- **60 communal ponds rehabilitated or constructed**
- **304 ha of land covered with soil and water conservation measures**
- **1,086 Ha of micro-watersheds protected through natural forest conservation, community forest establishment and public land tree planting activities**
- **Community-based agroforestry plots established on 1,477 hectares of private and communal lands to conserve soil and water**
- **4,665 HH are trained on climate-resilient farming methods**
- **127 thresher user groups trained on resilient post-harvest processing and 36 elevated storage system installed in order to reduce climate-induced post-harvest losses**
- **1,400 HH received climate resilient livestock production training**
- **1,800 HH has increased diversity of livestock assets**
- **Climate profiles and hazard maps (floods, earthquake and drought) for 5 townships updated and distributed to local government and related departments**
- **75 community based disaster risk management (CBDRM) team are formed to relay climate related early warning information**
- **75 village disaster management plan formulated to reduce risk and prepare communities during extreme events**

- 5 Climate risk information sub-committees established in targeted townships for effective communication of climate risks and early warning information
- 5 agro-advisories per township/month issued to provide early warning to farmers and adapt to extreme weather events
- Exit strategy and sustainability strategy/plan, including handover of activities for all project components prepared and implemented

Estimated annual budget:	US\$ 1,965,990
Total allocated resources:	US\$ 1,965,990
<ul style="list-style-type: none"> • Regular : • Other : ○ Adaptation Fund 	US\$ 256,964 US\$ 1,709,026 US\$ 1,709,026

Cleared by:



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 Biplove Choudhary
 Chief of Unit (Sustainable Inclusive Growth Unit)

Date:



Agreed by:



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 Peter Batchelor
 Country Director, UNDP Myanmar

Date:

Annual Work Plan: Addressing Climate Change Risks on Water Resources and Food Security in the Dry Zone of Myanmar (Atlas project ID: 00089618)Year: 2018

EXPECTED OUTPUT	PLANNED ACTIVITIES	GEOGRAPHICAL AREA OF INTERVENTION	CROSS PILLAR/ OUTPUT LINKAGES	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
				Q1	Q2	Q3	Q4		FUNDING SOURCE	BUDGET DESCRIPTION	AMOUNT
<p><u>Indicators:</u></p> <p>1. Additional community-based freshwater supply and storage infrastructure put in place in drought-prone villages</p> <p>2. Hectares of watershed area protected through community-based afforestation, reforestation and regeneration practices</p> <p>3. Hectares of land covered by systematic new agroforestry plantations</p> <p>4.1. Number of Dry Zone farmers exposed to and involved in climate resilient farming techniques</p> <p>4.2. Accessibility to drought-resilient seed varieties</p> <p>4.3. Number of project and non-project</p>											
<p>1.3. Community-based DRR/CCA pilot demonstration (Addressing Climate Change Risks On Water Resources And Food Security in the Dry Zone of Myanmar)</p>											
4.1. Number of Dry Zone farmers exposed to and involved in climate resilient farming techniques	1.3.1. Water capture and storage capacities in 280 villages enhanced to ensure sufficient irrigation and potable water supply during dry periods	Mandalay, Magwe, Sagaing	1 & 2	x	x	x	x	UNDP, GAD, DOA, FD, DZGD,DRD, IWUMID, NGOs/ CSOs	AF	Contractual Services-Individ	27,148

<p>community members participating in exchange visits and demonstration plots</p> <p>5. % of (farmers) households who report reduced harvest losses due to improved post-harvest processing and storage</p> <p>6. Number of marginal and landless households (vulnerable households) with increased diversity of livestock assets</p> <p>7. Number of climate risk communication products such as maps and scenarios in active use by Township authorities, NGOs and CBOs to improve planning decisions and prioritize investment actions</p> <p>8.1. Number of local institutions that issue regular warning and forecasting communications to community-based organisations and vulnerable households</p> <p>8.2. Number of climate related information materials produced to assist Dry Zone households to adjust their livelihood behaviour</p>	<p>- Coordination platform (Technical institutions, CBOs, NGOs) for design and co-finance appropriate water harvesting, storage, filtering, retention structures</p> <p>- Strengthen Village Water User (WUV) Groups ensuring greater engagement of women in leadership positions, structures and schemes, trainings</p> <p>- Awareness raising on climate risks and water management</p> <p>- Technical reports and case studies</p>	<p>Mandalay, Magwe, Sagaing</p> <p>1&2</p>	<p>x</p> <p>x</p> <p>x</p> <p>x</p> <p>x</p> <p>x</p>	<p>UNDP, GAD, FD,DZGD,DRD, IWUMD, NGOs/CSOs</p>	<p>UNDP</p> <p>AF</p>	<p>Travel</p> <p>Contractual Services-Companies</p> <p>Salary Cost-NP</p> <p>Salary&Post Adj Cst-IP</p> <p>Contractual Services-Individ</p> <p>Travel</p> <p>Contractual Services-Company</p>	<p>5,000</p> <p>233,000</p> <p>4,525</p> <p>34,970</p> <p>15,203</p> <p>4,000</p> <p>290,000</p>
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<p><u>Baseline:</u></p> <p>1. 0 additional freshwater supply and/or storage infrastructure in drought-prone villages to account for climate change-induced increases in drought</p> <p>2. 1,500 ha of natural forest conservation and community based reforestation practices in the critical watershed area in the project area</p> <p>3. 160 ha of traditional agro-forestry home garden and 430 ha of farm boundary plantations currently exist in 280 villages in five targeted Townships</p> <p>4.1. In project target villages, farmers have only limited exposure to climate-resilient farming techniques</p> <p>4.2. Only limited seed sources are available in the target Townships</p>	<p>women's views and needs.</p> <ul style="list-style-type: none"> - Cofinancing (in-kind) arrangements with above stakeholders for FMNR activities - Afforestation and reforestation activities conducted covering 680 hectares of land, engaging both men and women in plantation activities. - Formulation of community forestry management plan in line with CFI guidelines - Report on the success and challenges of community forestry management plan 	<p>Mandalay, Magwe, Sagaing</p>	<p>1&2</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>UNDP, GAD, FD, DZGD, DRD, IWUMD, NGOs/CSOs</p>	<p>AF</p>	<p>Salary & Post Adj Cst-IP</p>	<p>87,423</p>
									<p>UNDP</p>		<p>Materials & Goods</p>	<p>158,026</p>
											<p>Salary Cost-NP</p>	<p>4,525</p>
											<p>Contractual Services-Individ</p>	<p>11,944</p>
											<p>Travel</p>	<p>7,500</p>

<p>4.3. Currently there is no initiative(s) in the Dry Zone promoting cross exchange between the Townships of practical knowledge on climate resilient farming techniques</p>	<p>taking leadership role.</p> <ul style="list-style-type: none"> - Community led inventory of agro-forestry practices in 280 villages updated including economic benefits of intervention and promote locally suitable agro-forestry approach, as well as considering women's views and needs. 	<p>134,489</p>	<p>Contractual Services-Company</p>
<p>5. Only few households apply improved post-harvest processing techniques</p>	<p>- Provision of diversified suit of relevant crops, tree species and water-saving technologies and related trainings, exchange visits</p>	<p>124,164</p>	<p>Materials & Goods</p>
<p>6. Majority of impoverished households (either landless or marginal) in the Dry Zone have zero or small number of livestock (65% of landless and marginal farmers have no livestock, 35% of them have some livestock)</p>	<p>- Technical assessment report on the effectiveness, success and challenges of climate-resilient agroforestry practices</p>	<p>3,620</p>	<p>Salary Cost-NP</p>
<p>7. No climate risk communication products such as maps and scenarios in active use by Township authorities, NGOs and CBOs to improve planning decisions and prioritize investment actions</p>	<p>1&2</p>	<p>37,467</p>	<p>Salary&Post Adj Cst-IP</p>
<p>Mandalay, Magwe, Sagaing</p>		<p>AF</p>	<p>Contractual Services-Individ</p>
<p>1.3.4. Drought-resilient farming methods introduced to farmers to enhance the resilience of subsistent agriculture in the Dry Zone</p>		<p>x</p>	<p>13,574</p>
<p>- Training targeting Dry Zone farmers, especially women</p>		<p>x</p>	<p>Travel</p>
<p>UNDP, GAD, DOA, DAR, YAU, IWUMD, DMH NGO/CSO</p>		<p>x</p>	<p>5,000</p>
<p>x</p>		<p>x</p>	<p>x</p>
<p>x</p>		<p>x</p>	<p>x</p>

<p>8. Currently no such information is available except weekly/monthly weather forecasts broadcasted over TV/radio</p> <p><u>2018 Targets:</u></p> <ul style="list-style-type: none"> - <i>70 small scale water pumping systems installed</i> - <i>56 communal water tanks installed</i> - <i>20 shallow tube well and 12 deep tube well renovated or constructed</i> - <i>60 communal ponds rehabilitated or constructed</i> - <i>304 ha of land covered with soil and water conservation techniques</i> - <i>1,086 Ha of micro-watersheds are protected through natural forest conservation, community forest establishment and public land tree planting activities</i> - <i>Community-based agroforestry plots established on 1477 hectares of private and communal lands</i> 	<p>headed households and extension workers on a range of climate-resilient farming methods</p> <ul style="list-style-type: none"> - Provision of drought-resilient varieties to village-level research farms in 140 villages participatory, - demonstration plots in 50 villages and undertake field trials of drought resistant crops and drip irrigation techniques - Exchange visits and farmer's field school involving project and non-project community - One technical report capturing lessons learnt on the effectiveness of drought-resilient farming methods 	<p>Mandalay, Magwe, Sagaing</p>	<p>1&2</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>UNDP</p>	<p>Contractual Services-company</p>	<p>83,997</p>
										<p>Salary Cost-NP</p>	<p>3,167</p>
										<p>Salary&Post Adj Cst-IP</p>	<p>37,467</p>
										<p>Contractual Services-Individ</p>	<p>13,574</p>
										<p>Travel</p>	<p>1,000</p>
										<p>Contractual Services-Company</p>	<p>83,996</p>

<p>to conserve soil and water</p> <ul style="list-style-type: none"> - 4,665 HH are trained on climate-resilient farming methods - 127 thresher user groups have been trained on resilient post-harvest processing and 36 elevated storage system installed in order to reduce climate-induce post-harvest losses - 1400 HH received climate resilient livestock production training 	<p>disaggregated views on current practices and issues</p> <ul style="list-style-type: none"> - Provision of community-managed rice threshers to 140 villages where post-harvest loss are highest and ensuring women take up management role in operationalizing thresher user groups. - Technical report on the effectiveness, success and challenges of climate-resilient post-harvest practices 	<p>Mandalay, Magwe, Sagaing</p>	<p>182</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>UNDP</p>	<p>Salary Cost-NP</p>	<p>1,810</p>
<ul style="list-style-type: none"> - 1800 HH has increased diversity of livestock assets - Climate profiles and hazard maps (floods, earthquake and drought) for 5 townships updated and distributed to local government and related departments 	<p>1.3.6 Climate resilient livestock production systems introduced in 6,300 landless, rural households</p> <ul style="list-style-type: none"> - Capacity building (targeting mainly women-headed and landless households for diversified livestock rearing, 	<p>UNDP, LBVD, NGO, CSO</p>	<p>182</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>AF</p>	<p>Salary&Post Adj Cst-IP</p>	<p>4,996</p>	
									<p>Contractual Services-Individ</p>	<p>27,148</p>
									<p>Travel</p>	<p>5,500</p>

<p>- 75 community based disaster risk management (CBDRM) team are formed to relay climate early warning information</p> <p>- 75 village disaster management plan formulated to reduce risk and prepare communities during extreme events</p> <p>- 5 Climate risk information sub-committees established in targeted townships for effective communication of climate risk and early warning information</p> <p>- 5 agro-advisories per township/month issued to provide early warning to farmers and adapt to extreme weather events</p> <p>- Exit strategy and sustainability strategy/plan, including handover of activities for all project components prepared and implemented</p>	<p>improved fodder preparation and storage, rangeland management, disease control methods, fodder bank and livestock shelter practices</p> <ul style="list-style-type: none"> - Provide high productivity / drought tolerant livestock (pigs, sheep, goat, chicken) to landless and marginal farmers (prioritizing women-headed households), - Community agreement on benefit sharing from diversified and climate resilient livestock practice - Organize events to demonstrate participatory animal (cross) breeding - Assessment report on the effectiveness, success and challenges of diversified livestock production systems <p>1.3.7 Strengthen community-based climate risk management and preparedness planning through development of climate hazard /risk maps and scenarios</p>	<p>Mandalay, Magwe, Sagaing</p>	<p>1&2</p>	<p>x</p>	<p>x</p>	<p>x</p>	<p>UNDP, DMH, GAD, NGO, CSO</p>	<p>AF</p>	<p>Salary&Post Adj Cst-IP</p>	<p>9,991</p>	
									<p>UNDP</p>	<p>Salary Cost-NP</p>	<p>2,262</p>
										<p>Contractual Services</p>	<p>34,985</p>

	<ul style="list-style-type: none"> - Report on future climate scenario in dry zone based on available information, township level climate hazard, risk and vulnerability maps developed and updated - Participatory vulnerability assessment at Township and village tract level that recognizes views of both men and women, - Organize town-hall meetings, to discuss climate risk and hazard information and lessons learned from risk reduction measures into rural development planning and investment processes 	Mandalay, Magwe, Sagaing	182	x	x	x	x	UNDP, GAD, DMH, NGO, CSO	AF	Salary&Post Adj Cst-IP	37,467
									UNDP	Salary Cost-NP	905
										Travel	3,500
										Travel	3,000

	<ul style="list-style-type: none"> - Operational procedures for CRI Sub-committee finalized - Seasonal agricultural bulletins - TOR and protocol for information flow from DMH/Drought Monitoring Centre to CBDRM Committees through DPC and considering views of both men and women - Formation and strengthening of Community-based Disaster Risk Management Committees (CBDRM) in 30 villages including mock drills and making sure women play leadership role in CBDRM activities. - National, Regional and local level trainings on climate risk information 						<p>Contractual Services-Companies</p> <p>Contractual Services-Companies</p> <p>Miscellaneous Exp(Cost recovery)</p> <p>Salary Cost-NP</p>	<p>109,440</p> <p>16,934</p> <p>24,500</p> <p>1,809</p>	
TOTAL PROGRAMME IMPLEMENTATION COST								<p>AF</p> <p>UNDP</p> <p>AF</p> <p>UNDP</p>	<p>1,686,403</p> <p>22,623</p> <p>22,623</p> <p>183,621</p>
PROGRAMME MANAGEMENT COST								<p>Monitoring & Evaluation, Travel, DSA, Individual consultant, Workshop, etc.</p> <p>Staff Cost</p>	<p>50,720</p>

	Total	256,964
GRAND TOTAL	AF	1,709,026
	UNDP	256,964
	Total	1,965,990